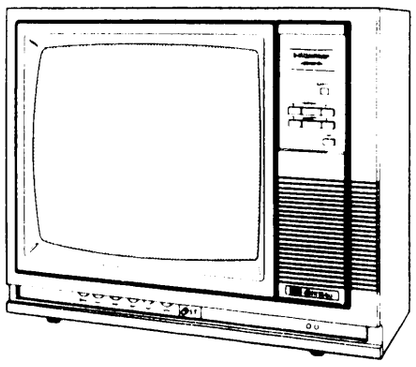
HITACHI

SERVICE MANUAL

YK | No.973E

CT1942/CT19A2

NP83X Chassis



This service manual shows only essential items
Our complete service manual including "alignment procedure", and "technical information" are issued by manual No. 895.

CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this Service Manual.

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

COLOR TELEVISION

July 1984 **YOKOHAMA WORKS**

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.

WARNING: Since the chassis of this receiver is connected to one side of AC power supply during operation, whenever the receiver is plugged in, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

The following precautions should be observed.

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep picture tube away from the body while handling.
2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.
3. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, non-metallic knobs, adjustment and compartment cover shields, isolation resistor capacitor, etc.
4. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
5. Always use the manufacturer's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

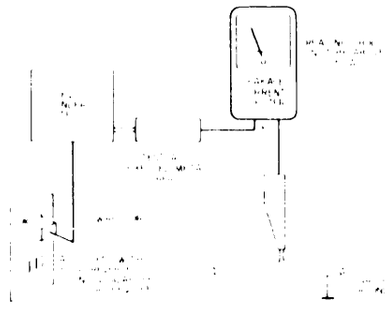
Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolation transformer for this check). Turn the AC power switch on. Using a "leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (antennas, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

High Voltage

This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may correctly be operated.

Serviceman warning

With minimum Brightness and Picture, operating high voltage in this receiver is lower than 31.0KV. In case any component having influence on high voltage is replaced, confirm that high voltage with minimum Brightness and Picture is lower than 31.0KV. To measure H.V. use a high impedance H.V. meter. Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram)

NOTE: Turn power switch off without fail before the connection with Anode button is made.

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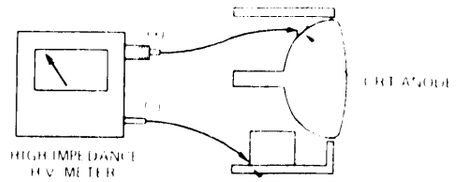


X radiation

TUBE: The primary source of X radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X radiation emission.

For continued X radiation protection, the replacement tube must be the same type as the original HITACHI approved type.

When trouble shooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage component.

Do not operate the chassis longer than is necessary to locate the cause excessive voltage.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ! on the schematic and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one shown in the parts list in this Service Manual, may create shock, fire, X radiation or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of, HITACHI Service Manual may be obtained at a nominal charge from HITACHI SALES CORPORATION.

TECHNICAL SPECIFICATIONS

ANTENNA INPUT IMPEDANCE	300Ω, 75Ω	POWER INPUT	AC120V 60Hz
CHANNEL COVERAGE		POWER RATING	99W
VHF	2 - 13	CONVERGENCE	Self convergence
UHF	14 - 83	FOCUS	Electrostatic
CATV	A - W	SOUND OUTPUT	2W 400Hz
CHANNEL INDICATOR	DIGITAL ON SCREEN	SPEAKER	8 × 12 cm 8Ω
INTERMEDIATE FREQUENCY		DIMENSIONS	
Picture I.F Carrier	45.75MHz	W	64.2 cm
Sound I.F Carrier	41.25MHz	H	46.3 cm
Sound I.F	4.5MHz	D	47.6 cm
		WEIGHT	Appr. 22.5 kg

TECHNICAL CAUTIONS

[CHECK OF HIGH VOLTAGE HOLD DOWN CIRCUIT]

Checking of the high voltage hold down circuit operation

1 Turn the switch of the set OFF.
2 Connect a high voltage voltmeter between the CRT anode and the chassis ground (K3) as shown in Fig. 1.
3 Short circuit between the R605 (B+) and R902 using a jumper wire as shown in Fig. 2.
4 Set Brightness Picture controls to max.
5 Turn the switch of the set ON after setting the AC input voltage to 0V, and then gradually increase the AC input voltage and check that the picture disappears when the high voltage is less than 31.0KV.
6 Turn the switch of the set OFF immediately after checking that the picture disappears.
7 Remove the adjusting jig and the voltmeter.

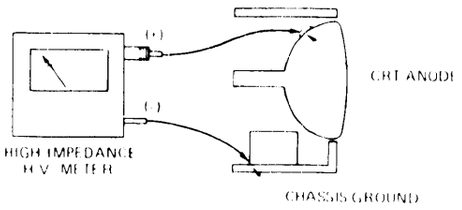


Fig. 1 Connection of H.V. Meter

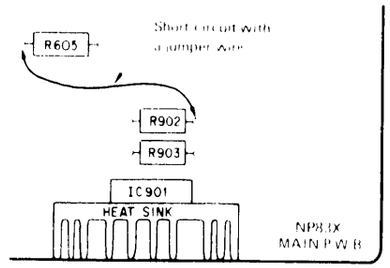


Fig. 2

CONTROLS

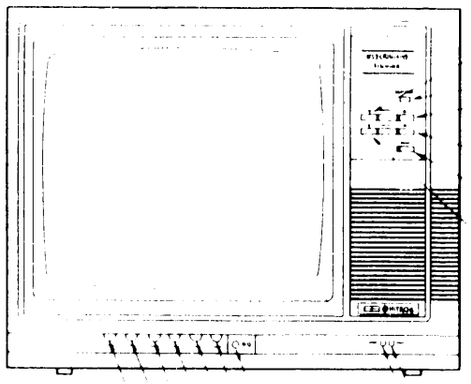


Fig. 3

OPERATING SUMMARY

1 POWER BUTTON

Push the POWER BUTTON to turn the set ON. (To turn the set OFF, push the POWER BUTTON again.)

2 VOLUME BUTTON

Push the right side (▲ UP) of the VOLUME BUTTON to make sound louder and left side (▼ DOWN) of the VOLUME BUTTON to make sound softer.

3 BAND SELECTOR SWITCH

The BAND SELECTOR SWITCH is installed at the back of the set.
Your TV can receive 12 VHF channels, 70 UHF channels and 35 CATV channels. Choose the required reception band by sliding the BAND SELECTOR SWITCH shown as in Figure 4.

NOTE When shipped from the factory, this BAND SELECTOR SWITCH is set to the "NORM" position.

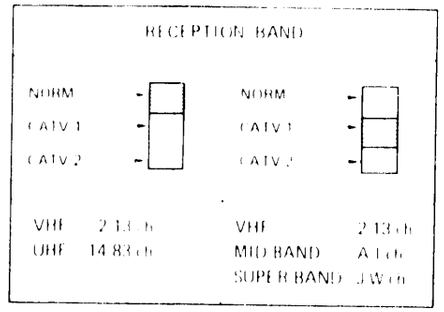


Fig. 4

4 CHANNEL BUTTON

Channel selection may be performed by pressing either the CHANNEL BUTTON UP (▲) or DOWN (▼). When pressing the right side (▲ UP) of CHANNEL BUTTON, the next higher chanel is selected. And when pressing the left side (▼ DOWN) of the CHANNEL BUTTON, the next lower channel is selected. The channel number of the channel to which is tuned is indicated in the lower right side of the screen (Fig. 5). The channel number selected is displayed for approx. 4 seconds after changing channels and disappears automatically. (When you turn the set ON, the channel number is displayed on the screen for approx. 10 seconds.)

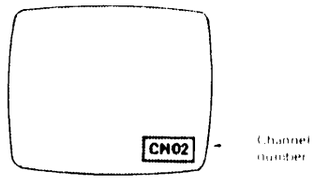
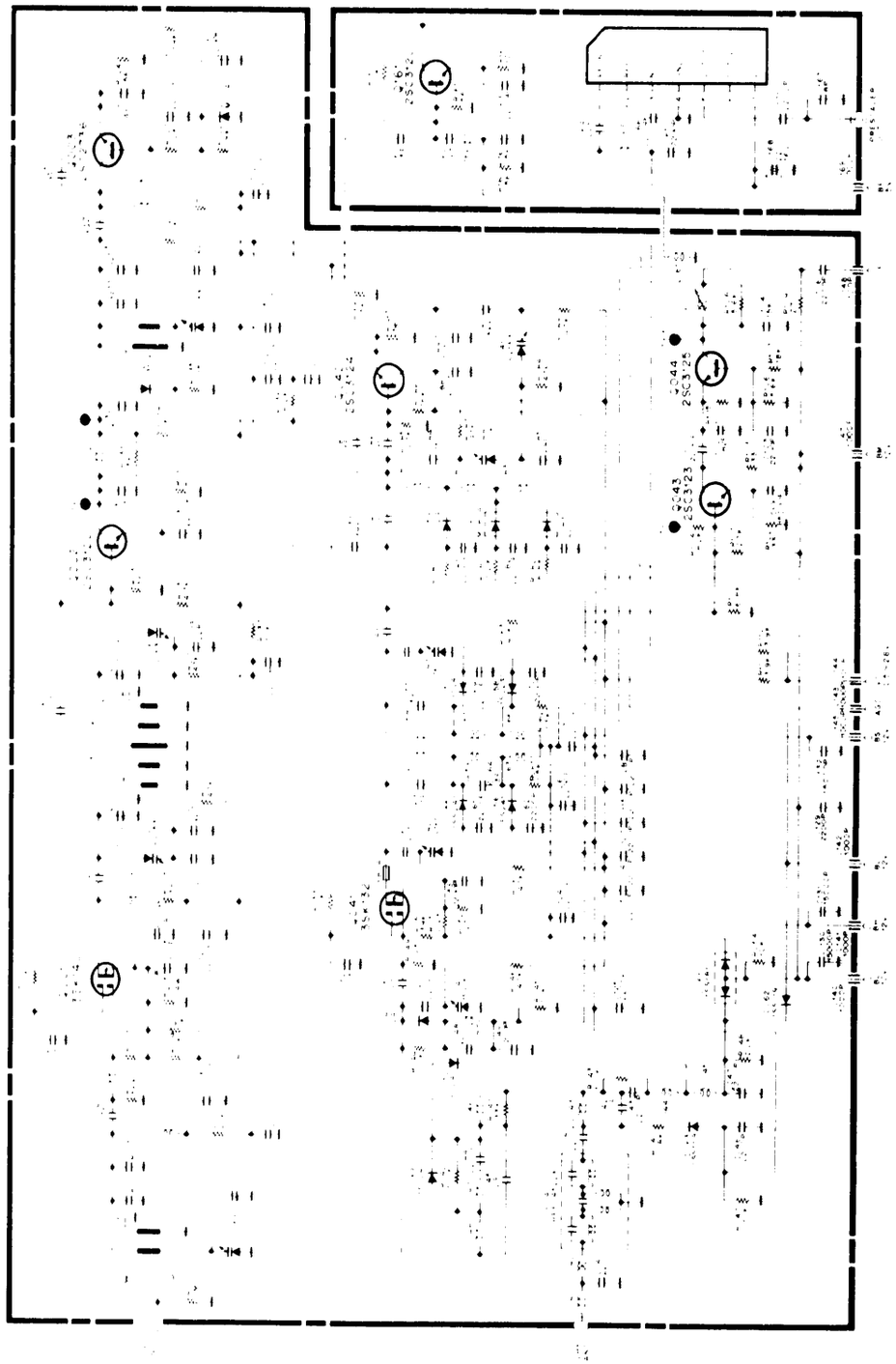


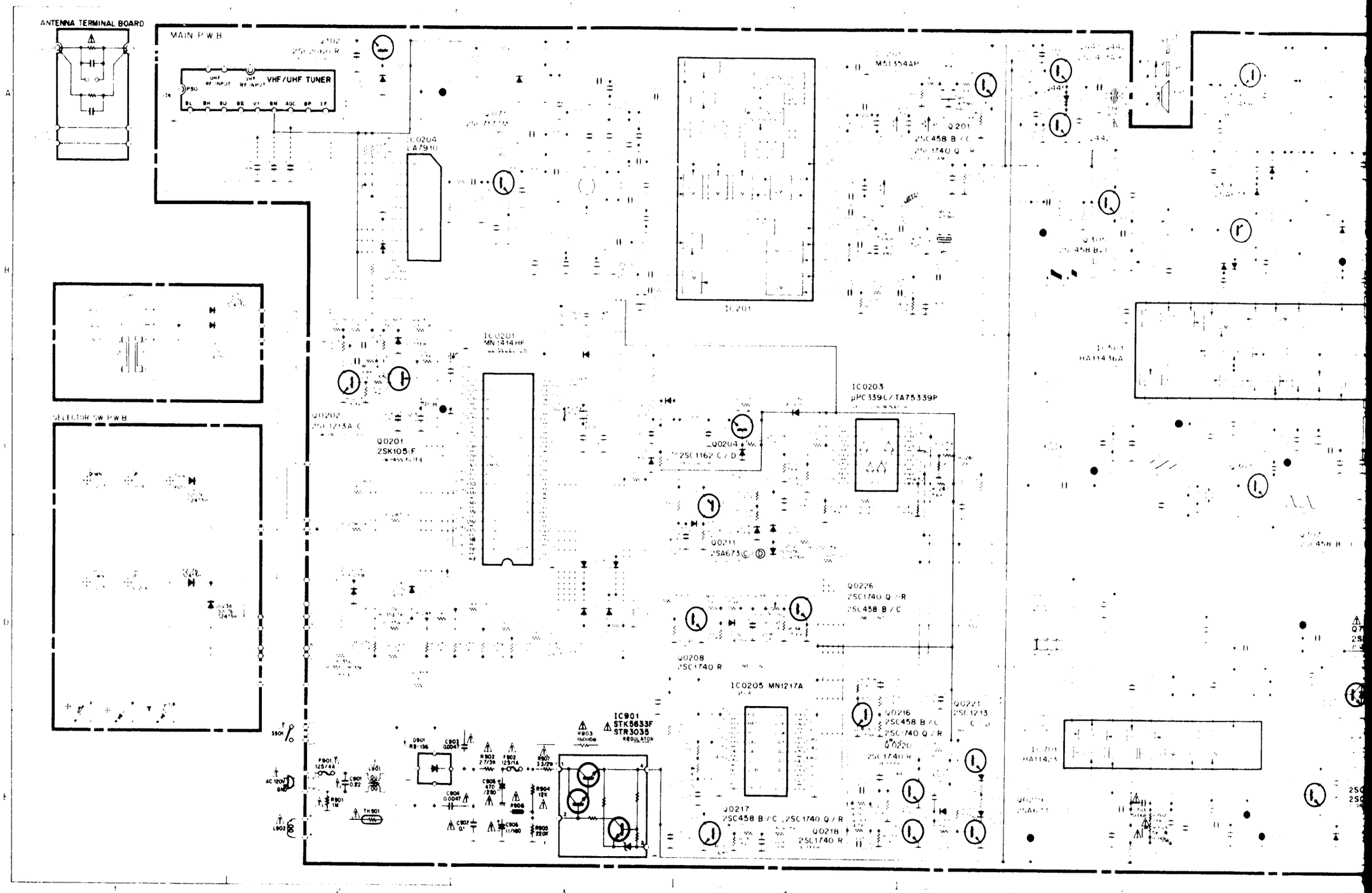
Fig. 5

5 CATV

The CATV BAND SELECTOR SWITCH is installed of the back of the set and can be set to "CATV 1" and "CATV 2". Set it to "CATV 1" to use the set in general. (Refer to Fig. 4)
CATV channel selection can be done with the CHANNEL BUTTON UP (▲) or DOWN (▼) as with VHF.UHF channels. When receiving CATV 2-13 channels, 2-13 is indicated on the screen.
When receiving Mid band channels A-I, 14-22 is indicated, and when receiving Super band channels J-W, 23-36 is indicated.

TUNER CIRCUIT DIAGRAM (ET-397P)

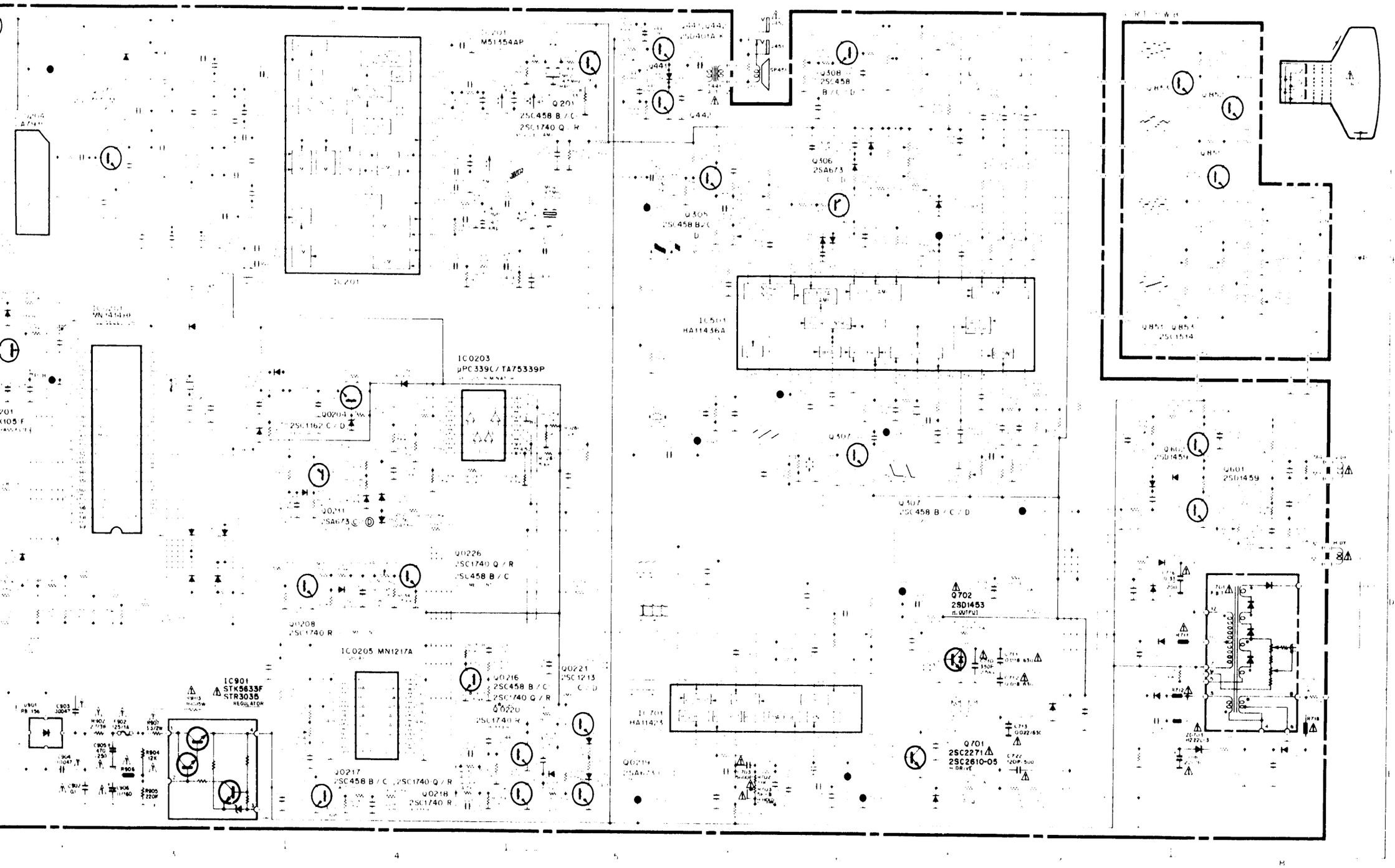




- See the circuit diagram for the [illegible]
- All DC voltage to be measured with a [illegible]
Voltage taken on a complex color bar signal including [illegible]

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE



- Caution: This is a basic circuit diagram. The components identified by the safety mark are critical for safety. Replace only with part number specified.
- All DC voltage to be measured with a tester (10KΩ/V)

Voltage taken on a complex color bar signal and using a standard color bar signal

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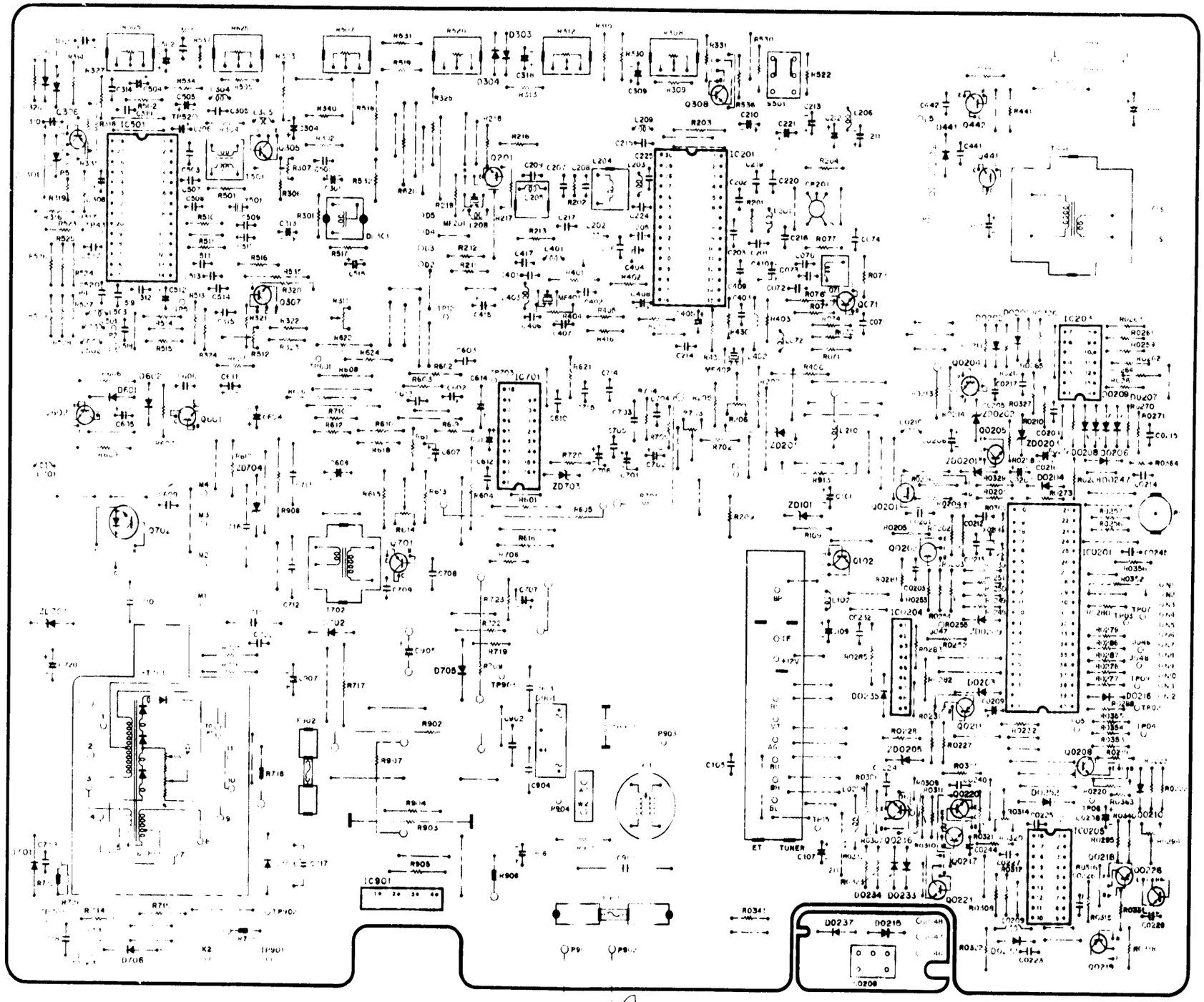
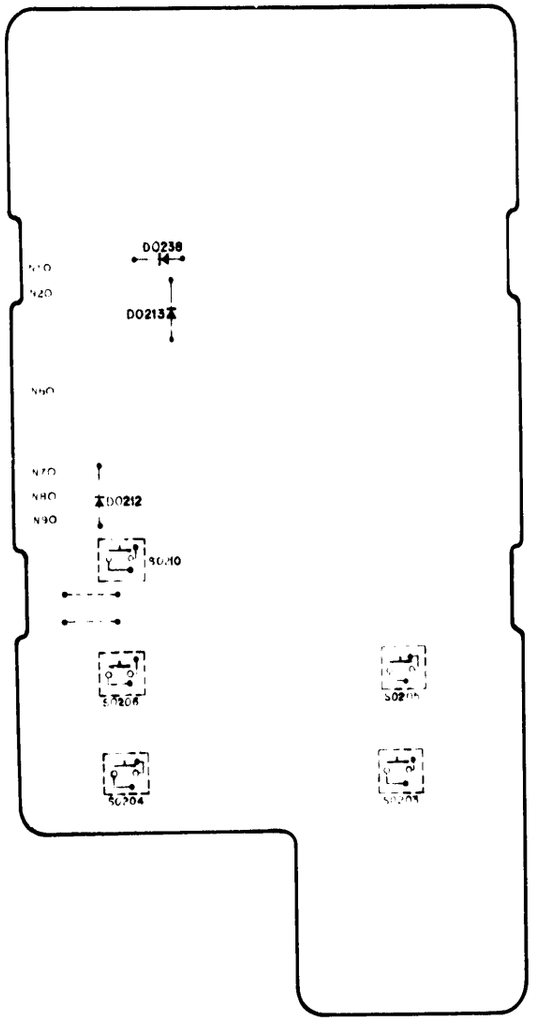
PRINTED WIRING BOARD

MAIN P.W. BOARD



SELECTOR P.W. BOARD



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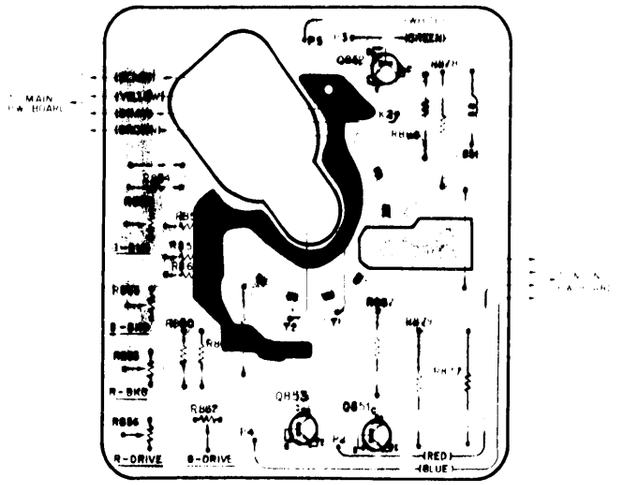
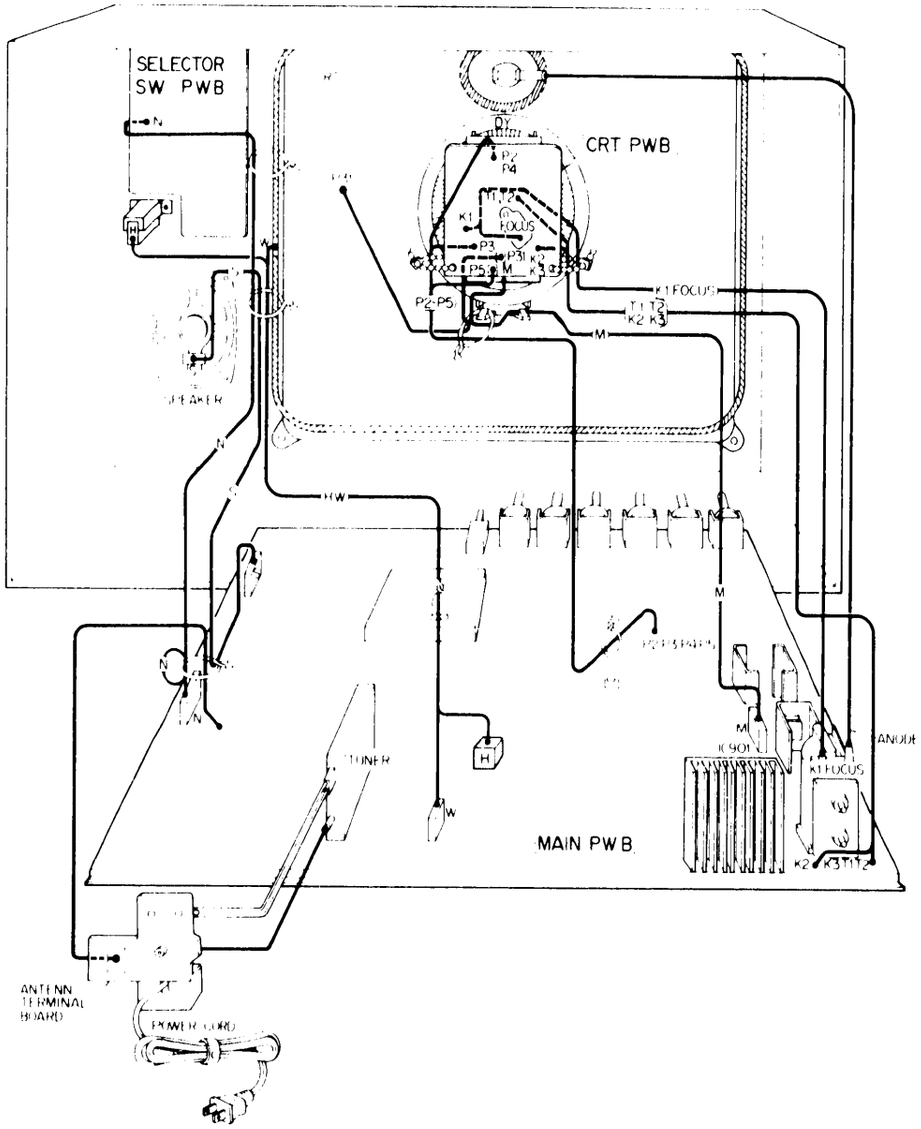
C.R.T. P.W. BOARD



WIRING DIAGRAM



REPLACEMENT PARTS LIST

PRODUCT SAFETY NOTE: Components marked with a ▲ have special characteristics important to safety. Before replacement of any of these components, read carefully the PRODUCT SAFETY NOTICE in this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS: Capacitors: CD Ceramic disk, PF Polyester film, EL Electrolytic, PP Polypropylene, PR Paper, TA Tantalum, TM Trimmer
Resistors: CF Carbon film, CC Carbon composition, MF Metal oxide film, VR Variable resistor, WW Wire would, FR Fuse resistor

SYMBOL NO	PART NO	DESCRIPTION
		CAPACITORS
C0201	0277029	PF 0.33MF +-10% 50V
C0203	0277021	PF 0.047MF +-10% 50V
C0205	0277019	PF 0.033MF +-10% 50V
C0206	0253031	EL 220MF 10V
C0207	0253082	EL 1MF 50V
C0208	0253066	EL 10MF 25V
C0209	0253082	EL 1MF 50V
C0212	0246448	CD 22PF +-5% 50V
C0213	0246420	CD 10PF +-0.5% 50V
C0214	0277013	PF 0.01MF +-10% 50V
C0215	0277013	PF 0.01MF +-10% 50V
C0216	0253030	EL 100MF 10V
C0217	0277025	PF 0.1MF +-10% 50V
C0224	0277011	PF 6800 PF+-10% 50V
C0225	0248684	CD 100PF +-5% 50V
C0226	0248692	CD 220PF +-5% 50V
C0227	0248692	CD 220PF +-5% 50V
C0228	0253051	EL 220MF 16V
C0232	0248684	CD 100PF +-5% 50V
C0233	0248688	CD 150PF +-5% 50V
C0240	0277013	PF 0.01MF +-10% 50V
C0244	0248640	CD 150PF +-0.25PF 50V
C0245	0277021	PF 0.047MF +-10% 50V
C0251	0277021	PF 0.047MF +-10% 50V
C071	0244105	CD 2200PF +-10% 50V
C072	0244105	CD 2200PF +-10% 50V
C073	0246442	CD 12PF +-5% 50V
C074	0244105	CD 2200PF +-10% 50V
C076	0244105	CD 2200PF +-10% 50V
C101	0253065	EL 4.7MF 25V
C105	0277023	PF 0.068MF +-10% 50V
C107	0253047	EL 22MF 16V
C109	0253066	EL 10MF 25V
C110	0244105	CD 2200PF +-10% 50V
C201	0244105	CD 2200PF +-10% 50V
C203	0244105	CD 2200PF +-10% 50V
C205	0246418	CD 8PF +-0.25PF 50V
C206	0246466	CD 120PF +-5% 50V
C207	0246443	CD 13PF +-5% 50V
C208	0246464	CD 100PF +-5% 50V
C209	0246463	CD 91PF +-5% 50V
C210	0252807	EL 0.33MF 50V

SYMBOL NO	PART NO	DESCRIPTION
C211	0253083	EL 2.2MF 50V
C212	0253082	EL 1MF 50V
C213	0252805	EL 0.1MF 50V
C214	0244105	CD 2200PF +-10% 50V
C215	0244105	CD 2200PF +-10% 50V
C216	0244105	CD 2200PF +-10% 50V
C217	0244105	CD 2200PF +-10% 50V
C219	0248680	CD 68PF +-5% 50V
C220	0244105	CD 2200PF +-10% 50V
C221	0253047	EL 22MF 16V
C301	0253066	EL 10MF 25V
C304	0253065	EL 4.7MF 25V
C305	0244139	CD 1000PF +-10% 50V
C306	0253066	EL 10MF 25V
C307	0244139	CD 1000PF +-10% 50V
C308	0253066	EL 10MF 25V
C309	0253048	EL 33MF 16V
C310	0253065	EL 4.7MF 25V
C313	0253054	EL 1000MF 16V
C314	0244116	CD 180PF +-10% 50V
C315	0244113	CD 330PF +-10% 50V
C317	0253082	EL 1MF 50V
C318	0253082	EL 1MF 50V
C401	0248672	CD 33PF +-5% 50V
C402	0244171	CD 0.01MF +80-20% 50V
C403	0246448	CD 22PF +-5% 50V
C404	0244107	CD 3300PF +-10% 50V
C405	0253082	EL 1MF 50V
C406	0244171	CD 0.01MF +80-20% 50V
C407	0253082	EL 1MF 50V
C408	0253082	EL 1MF 50V
C409	0244171	CD 0.01MF +80-20% 50V
C410	0253050	EL 100MF 16V
C415	0253452	EL 1MF 160V
C417	0248680	CD 68PF +-5% 50V
C418	0276823	PF 0.01MF +-5% 50V
C434	0277025	PF 0.1MF +-10% 50V
C441	0243511	CD 680PF +-5% 50V
C442	0243512	CD 820PF +-10% 500V
C443	0253455	EL 4.7 MF 160V
C444	0253457	EL 22MF 160V
C501	0248686	CD 120PF +-5% 50V
C502	0253066	EL 10MF 25V

PRODUCT SAFETY NOTE: Components marked with a ' ' have characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE in the Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO	PART NO	DESCRIPTION
C503	0.046871	CC 33PF +-5% 50V
C504	0.053066	EL 1MF 25V
C505	0.052800	EL 0.47MF 50V
C507	0.049271	CC 0.01MF +80-20% 50V
C508	0.046454	CC 3PF +-5% 50V
C509	0.046445	CC 2.2P +-5% 50V
C510	0.046451	CC 27P +-5% 50V
C511	0.227019	PP 0.033MF +-10% 50V
C512	0.053066	EL 1MF 25V
C513	0.046872	CC 33PF +-5% 50V
C514	0.046864	CC 100PF +-5% 50V
C515	0.053082	EL 1MF 50V
C516	0.044731	CC 0.01MF +80-20% 50V
C517	0.044230	CC 270 PF+-10% 50V
C518	0.044230	CC 270 PF+-10% 50V
C519	0.044230	CC 270 PF+-10% 50V
C601	0.227020	PP 1MF 63V
C602	0.053082	EL 1MF 50V
C603	0.227019	PP 0.033MF +-10% 50V
C604	0.053457	EL 2.2MF 160V
C605	0.053086	EL 4.7MF 50V
C606	0.046864	CC 100PF +-10% 500V
C607	0.053082	EL 1MF 50V
C608	0.053090	EL 100MF 16V
C609	0.044565	CC 4700PF +100-0% 500V
C610	0.044103	CC 1000PF +-10% 50V
C611	0.053084	EL 3.3MF 50V
C612	0.227019	PP 0.033MF +-10% 50V
C613	0.227017	PP 0.022MF +-10% 50V
C614	0.052532	EL 220MF 16V
C701	0.053066	EL 10MF 25V
C702	0.053082	EL 1MF 50V
C703	0.299619	PP 0.0056 MF+-5% 630V
C704	0.044111	CD 6800PF +-10% 50V
C705	0.044136	CD 270 PF+-10% 50V
C706	0.053031	EL 220MF 10V
C707	0.053086	EL 10MF 50V
C708	0.299618	PP 0.022MF +-10% 200V
C709	0.044501	CD 1000PF +-10% 500V
C710	0.043837	CD 330PF +-10% 2.5KV
C711	0.299993	PP 0.018MF DC630V
C712	0.299993	PP 0.018MF DC630V
C713	0.299994	PP 0.022MF +-5% 630V
C714	0.227015	PP 0.015MF +-10% 50V
C715	0.227021	PP 0.047MF +-10% 50V
C716	0.299932	PP 0.33MF +-10% 250V
C717	0.058584	EL 10MF 160V
C718	0.227025	PP 0.1MF +-10% 50V
C719	0.044501	CD 1000PF +-10% 500V
C720	0.053055	EL 2200MF 16V

SYMBOL NO	PART NO	DESCRIPTION
C722	0.047856	CC 120PF +-5% 500V
C901	0.179719	MP 0.22MF +-10% 125V
C902	0.044641	CC 0.01MF +-10% 50V
C903	0.049150	CC 4700PF AC125V
C904	0.049150	CC 4700PF AC125V
C905	0.059976	EL 470MF DC200WV
C906	0.053456	EL 10 MF 160V
C907	0.053460	EL 100MF 16V

RESISTORS

R0201	0.100077	CF 3.3K OHM +-5% 1/8W
R0202	0.100093	CF 15K OHM +-5% 1/8W
R0203	0.100077	CF 3.3K OHM +-5% 1/8W
R0204	0.100109	CF 68K OHM +-5% 1/8W
R0205	0.100057	CF 470 OHM +-5% 1/8W
R0206	0.100099	CF 27K OHM +-5% 1/8W
R0208	0.100089	CF 10K OHM +-5% 1/8W
R0210	0.100107	CF 56K OHM +-5% 1/8W
R0211	0.100049	CF 220 OHM +-5% 1/8W
R0212	0.100093	CF 15K OHM +-5% 1/8W
R0213	0.110117	MF 68 OHM +-5% 1W
R0214	0.100065	CF 1K OHM +-5% 1/8W
R0219	0.100081	CF 4.7K OHM +-5% 1/8W
R0220	0.100089	CF 10K OHM +-5% 1/8W
R0222	0.100081	CF 4.7K OHM +-5% 1/8W
R0223	0.100079	CF 3.9K OHM +-5% 1/8W
R0227	0.100081	CF 4.7K OHM +-5% 1/8W
R0228	0.100073	CF 2.2K OHM +-5% 1/8W
R0231	0.100065	CF 1K OHM +-5% 1/8W
R0232	0.100107	CF 56K OHM +-5% 1/8W
R0239	0.100117	CF 150K OHM +-5% 1/8W
R0248	0.100089	CF 10K OHM +-5% 1/8W
R0249	0.100089	CF 10K OHM +-5% 1/8W
R0250	0.100089	CF 10K OHM +-5% 1/8W
R0251	0.100089	CF 10K OHM +-5% 1/8W
R0252	0.100113	CF 100K OHM +-5% 1/8W
R0253	0.100113	CF 100K OHM +-5% 1/8W
R0254	0.100113	CF 100K OHM +-5% 1/8W
R0255	0.100113	CF 100K OHM +-5% 1/8W
R0256	0.100089	CF 10K OHM +-5% 1/8W
R0257	0.100113	CF 100K OHM +-5% 1/8W
R0258	0.100065	CF 1K OHM +-5% 1/8W
R0259	0.100089	CF 10K OHM +-5% 1/8W
R0260	0.100097	CF 22K OHM +-5% 1/8W
R0261	0.100083	CF 5.6K OHM +-5% 1/8W
R0262	0.100077	CF 3.3K OHM +-5% 1/8W
R0263	0.100087	CF 8.2K OHM +-5% 1/8W
R0264	0.100086	CF 7.5K OHM +-5% 1/8W
R0265	0.100065	CF 1K OHM +-5% 1/8W

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SYMBOL NO	PART NO	DESCRIPTION
R0270	0.100089	CF 10K OHM +-5% 1/8W
R0271	0.100089	CF 10K OHM +-5% 1/8W
R0272	0.100113	CF 100K OHM +-5% 1/8W
R0278	0.100065	CF 1K OHM +-5% 1/8W
R0280	0.100065	CF 1K OHM +-5% 1/8W
R0281	0.100065	CF 1K OHM +-5% 1/8W
R0282	0.100097	CF 22K OHM +-5% 1/8W
R0283	0.100097	CF 22K OHM +-5% 1/8W
R0285	0.100083	CF 5.6K OHM +-5% 1/8W
R0286	0.100065	CF 1K OHM +-5% 1/8W
R0287	0.100065	CF 1K OHM +-5% 1/8W
R0294	0.150039	VR RS-B 20 KOHM-B
R0295	0.100113	CF 100K OHM +-5% 1/8W
R0306	0.100097	CF 22K OHM +-5% 1/8W
R0307	0.100079	CF 3.9K OHM +-5% 1/8W
R0308	0.100089	CF 10K OHM +-5% 1/8W
R0309	0.100093	CF 15K OHM +-5% 1/8W
R0310	0.100093	CF 15K OHM +-5% 1/8W
R0311	0.100085	CF 6.8K OHM +-5% 1/8W
R0312	0.100089	CF 10K OHM +-5% 1/8W
R0313	0.100053	CF 330 OHM +-5% 1/8W
R0314	0.150036	VR 2K OHM-B RS-B
R0315	0.100081	CF 4.7K OHM +-5% 1/8W
R0316	0.100089	CF 10K OHM +-5% 1/8W
R0318	0.100077	CF 3.3K OHM +-5% 1/8W
R0320	0.100081	CF 4.7K OHM +-5% 1/8W
R0321	0.100089	CF 10K OHM +-5% 1/8W
R0322	0.100063	CF 820 OHM +-5% 1/8W
R0323	0.100045	CF 150 OHM +-5% 1/8W
R0326	0.100091	CF 12K OHM +-5% 1/8W
R0327	0.100069	CF 1.5K OHM +-5% 1/8W
R0331	0.100055	CF 390 OHM +-5% 1/8W
R0332	0.100065	CF 1K OHM +-5% 1/8W
R0340	0.100083	CF 5.6K OHM +-5% 1/8W
R0341	0.100053	CF 330 OHM +-5% 1/8W
R0353	0.100065	CF 1K OHM +-5% 1/8W
R0354	0.100065	CF 1K OHM +-5% 1/8W
R0355	0.100065	CF 1K OHM +-5% 1/8W
R0356	0.100065	CF 1K OHM +-5% 1/8W
R0363	0.100069	CF 1.5K OHM +-5% 1/8W
R0364	0.100117	CF 150K OHM +-5% 1/8W
R0365	0.100061	CF 680 OHM +-5% 1/8W
R0367	0.100107	CF 56K OHM +-5% 1/8W
R071	0.100038	CF 75 OHM +-5% 1/8W
R072	0.100017	CF 10 OHM +-5% 1/8W
R073	0.100077	CF 3.3K OHM +-5% 1/8W
R074	0.100067	CF 1.2K OHM +-5% 1/8W
R075	0.100025	CF 22 OHM +-5% 1/8W
R076	0.100045	CF 150 OHM +-5% 1/8W
R077	0.100049	CF 220 OHM +-5% 1/8W

SYMBOL NO	PART NO	DESCRIPTION
R0199	0.100065	CF 1K OHM +-5% 1/8W
R0201	0.100053	CF 330 OHM +-5% 1/8W
R0202	0.100065	CF 1K OHM +-5% 1/8W
R0203	0.100131	CF 560K OHM +-5% 1/8W
R0204	0.100055	CF 390 OHM +-5% 1/8W
R0205	0.100065	CF 1K OHM +-5% 1/8W
R0206	0.150037	VR 5K OHM-B RS-B
R0207	0.100079	CF 3.9K OHM +-5% 1/8W
R0209	0.100094	CF 16K OHM +-5% 1/8W
R0210	0.100076	CF 3K OHM +-5% 1/8W
R0211	0.100065	CF 1K OHM +-5% 1/8W
R0212	0.100107	CF 56K OHM +-5% 1/8W
R0213	0.100113	CF 100K OHM +-5% 1/8W
R0216	0.100071	CF 1.8K OHM +-5% 1/8W
R0217	0.100050	CF 240 OHM +-5% 1/8W
R0218	0.100053	CF 330 OHM +-5% 1/8W
R0219	0.100049	CF 220 OHM +-5% 1/8W
R0221	0.100023	CF 18 OHM +-5% 1/8W
R301	0.100059	CF 560 OHM +-5% 1/8W
R302	0.100073	CF 2.2K OHM +-5% 1/8W
R303	0.100043	CF 120 OHM +-5% 1/8W
R304	0.100057	CF 470 OHM +-5% 1/8W
R305	0.150440	VR 1K OHM-C RV-12
R306	0.100065	CF 1K OHM +-5% 1/8W
R307	0.150034	VR 500 OHM-B RS-B
R308	0.150442	VR RV-12 10K OHM-B
R309	0.100077	CF 3.3K OHM +-5% 1/8W
R310	0.100093	CF 15K OHM +-5% 1/8W
R311	0.151716	VR 5K OHM-B RV-B
R312	0.150447	VR 500 OHM-B RV-12
R313	0.100093	CF 15K OHM +-5% 1/8W
R314	0.100109	CF 68K OHM +-5% 1/8W
R316	0.100089	CF 10K OHM +-5% 1/8W
R317	0.100055	CF 390 OHM +-5% 1/8W
R318	0.100099	CF 27K OHM +-5% 1/8W
R319	0.100055	CF 390 OHM +-5% 1/8W
R320	0.100091	CF 12K OHM +-5% 1/8W
R321	0.100091	CF 12K OHM +-5% 1/8W
R322	0.100061	CF 680 OHM +-5% 1/8W
R323	0.100065	CF 1K OHM +-5% 1/8W
R324	0.100091	CF 12K OHM +-5% 1/8W
R325	0.100075	CF 2.7K OHM +-5% 1/8W
R326	0.100093	CF 15K OHM +-5% 1/8W
R327	0.100041	CF 100 OHM +-5% 1/8W
R330	0.100089	CF 10K OHM +-5% 1/8W
R331	0.100087	CF 8.2K OHM +-5% 1/8W
R335	0.100041	CF 100 OHM +-5% 1/8W
R340	0.100062	CF 750 OHM +-5% 1/8W
R401	0.100057	CF 470 OHM +-5% 1/8W
R402	0.100065	CF 1K OHM +-5% 1/8W

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SYMBOL NO.	PART NO.	DESCRIPTION
R403	0100041	CF 100 OHM +-5% 1/8W
R404	0100073	CF 2.2K OHM +-5% 1/8W
R405	0100063	CF 820 OHM +-5% 1/8W
R406	0110113	MF 47 OHM +-5% 1W
R416	0100122	CF 240K OHM +-5% 1/8W
R430	0100053	CF 330 OHM +-5% 1/8W
R431	0100057	CF 470 OHM +-5% 1/8W
R441	0100109	CF 68K OHM +-5% 1/8W
R442	0100061	CF 680 OHM +-5% 1/8W
R443	0110169	MF 10K OHM +-5% 1W
R444	0113818	CF 220 OHM +-5% 1/2W
R445	0113818	CF 220 OHM +-5% 1/2W
R451	0113725	CF 100 OHM +-5% 1/2W
R501	0100064	CF 910 OHM +-5% 1/8W
R502	0100113	CF 100K OHM +-5% 1/8W
R505	0100099	CF 27K OHM +-5% 1/8W
R507	0150442	VR RV-12 10K OHM-B
R510	0100067	CF 1.2K OHM +-5% 1/8W
R511	0100057	CF 470 OHM +-5% 1/8W
R512	0150040	VR 50K OHM-E RS-8
R513	0100120	CF 200K OHM +-5% 1/8W
R514	0100062	CF 750 OHM +-5% 1/8W
R515	0100069	CF 1.5K OHM +-5% 1/8W
R516	0100073	CF 2.2K OHM +-5% 1/8W
R517	0100084	CF 6.2K OHM +-5% 1/8W
R518	0100079	CF 3.9K OHM +-5% 1/8W
R519	0100083	CF 5.6K OHM +-5% 1/8W
R520	0150451	VR 10K OHM-B RV-12
R522	0100065	CF 1K OHM +-5% 1/8W
R523	0100083	CF 5.6K OHM +-5% 1/8W
R524	0100079	CF 3.9K OHM +-5% 1/8W
R525	0100079	CF 3.9K OHM +-5% 1/8W
R526	0100079	CF 3.9K OHM +-5% 1/8W
R527	0100053	CF 330 OHM +-5% 1/8W
R528	0100053	CF 330 OHM +-5% 1/8W
R529	0100053	CF 330 OHM +-5% 1/8W
R530	0100075	CF 2.7K OHM +-5% 1/8W
R531	0100079	CF 3.9K OHM +-5% 1/8W
R532	0100089	CF 10K OHM +-5% 1/8W
R534	0100121	CF 220K OHM +-5% 1/8W
R535	0100089	CF 10K OHM +-5% 1/8W
R536	0100081	CF 4.7K OHM +-5% 1/8W
R537	0100107	CF 56K OHM +-5% 1/8W
R601	0100055	CF 390 OHM +-5% 1/8W
R602	0100047	CF 180 OHM +-5% 1/8W
R603	0100087	CF 8.2K OHM +-5% 1/8W
R604	0100097	CF 22K OHM +-5% 1/8W
R605	0111772	MF 680 OHM +-5% 5W
R606	0113762	CF 3.3K OHM +-5% 1/2W
R607	0114041	CF 10 OHM +-5% 1/4W
R608	0100065	CF 1K OHM +-5% 1/8W
R609	0113762	CF 3.3K OHM +-5% 1/2W
R610	0100091	CF 12K OHM +-5% 1/8W
R611	0100073	CF 2.2K OHM +-5% 1/8W
R612	0100089	CF 10K OHM +-5% 1/8W
R613	0114014	CF 7.5 OHM +-5% 1/4W
R614	0150034	VR 500 OHM-B RS-8
R615	0100051	CF 270 OHM +-5% 1/8W
R616	0110177	MF 22K OHM +-5% 1W
R617	0114173	CF 3.3K OHM +-5% 1/4W
R618	0100051	CF 270 OHM +-5% 1/8W
R619	0100089	CF 10K OHM +-5% 1/8W
R620	0100083	CF 4.3K OHM +-5% 1/8W
R621	0100053	CF 330 OHM +-5% 1/8W
R622	0100041	CF 100 OHM +-5% 1/8W
R623	0100113	CF 100K OHM +-5% 1/8W
R624	0114133	CF 120 OHM +-5% 1/4W
R625	0150441	VR 5K OHM-B RV-12
R626	0100041	CF 100 OHM +-5% 1/8W
R701	0110367	MF 8.2K OHM +-5% 3W
R702	0100090	CF 11K OHM +-5% 1/8W
R703	0150037	VR 5K OHM-B RS-8
R704	0100109	CF 68K OHM +-5% 1/8W
R705	0100085	CF 6.8K OHM +-5% 1/8W
R706	0100033	CF 47 OHM +-5% 1/8W
R708	0113785	CF 27K OHM +-5% 1/2W
R709	0110363	MF 5.6K OHM +-5% 3W
R710	0100075	CF 2.7K OHM +-5% 1/8W
R711	0119505	FR 2.2 OHM +-5% 1/4W
R712	0119505	FR 2.2 OHM +-5% 1/4W
R714	0119690	FR 0.27 OHM+-5% 1W
R715	0114281	CF 1.0K OHM +-5% 1/4W
R716	0113772	CF 8.2K OHM +-5% 1/2W
R717	0110233	MF 330 OHM +-5% 2W
R718	0119505	FR 2.2 OHM +-5% 1/4W
R719	0100093	CF 15K OHM +-5% 1/8W
R720	0100075	CF 2.7K OHM +-5% 1/8W
R722	0114153	CF 820 OHM +-5% 1/4W
R723	0100071	CF 1.8K OHM +-5% 1/8W
R725	0113774	CF 10K OHM +-5% 1/2W
R726	0119505	FR 2.2 OHM +-5% 1/4W
R735	0100065	CF 1K OHM +-5% 1/8W
R850	0100045	CF 150 OHM +-5% 1/8W
R852	0100067	CF 1.2K OHM +-5% 1/8W
R853	0151716	VR 5K OHM-B RV-8
R854	0100050	CF 240 OHM +-5% 1/8W
R856	0150001	VR 200 OHM-E
R858	0100067	CF 1.2K OHM +-5% 1/8W
R859	0151716	VR 5K OHM-B RV-8
R860	0100047	CF 180 OHM +-5% 1/8W

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SYMBOL NO.	PART NO.	DESCRIPTION
R862	0100001	CF 2.2 OHM-E
R864	0100067	CF 1.2K OHM +-5% 1/8W
R865	0151716	VR 5K OHM-B RV-8
R867	0113754	CF 1.5K OHM +-5% 1/2W
R868	0123701	CF 2.7K OHM +-5% 1/2W
R869	0113754	CF 1.5K OHM +-5% 1/2W
R877	0110271	MF 12K OHM +-5% 2W
R878	0110271	MF 12K OHM +-5% 2W
R879	0110271	MF 12K OHM +-5% 2W
! R901	0139215	CC 1M OHM +-10% 1/2W
! R902	0141166	mm 2.7 OHM + 5% 5W
! R903	0141105	mm 100 OHM+-5% 1W
! R904	0113776	CF 12K OHM +-5% 1/2W
! R905	0114289	CF 220K OHM +-5% 1/4W
! R906	0119509	FR 50 OHM +-5% 1/4W
! R907	0120020	mW RG 3P 3.3-K
R913	0110271	MF 12K OHM +-5% 2W

ICs

IC901	2700482	IC MC1354AP
IC902	2305161	IC HA11436A
IC701	2304181	IC M51423
! IC901	2306101	IC STR3035
IC601	2300292	IC MN1414HF
IC203	2305411	IC UPC339C/TA75339P
IC204	2306021	IC LA7910
IC229	2306571	IC MN1217A

TRANSISTORS

Q0201	2324082	TR 2SK105(F)
Q0202	2320063	TR 2SC1213AC
Q0204	2300845	TR 2SC1162W (C)/(D)
Q0208	2322191	TR 2SC1740(R)
Q0211	2320637	TR 2SA673C/D
Q0216	0573480	TR 2SC458B
Q0217	0573480	TR 2SC458B
Q0218	2322191	TR 2SC1740(R)
Q0219	2320637	TR 2SA673C/D
Q0220	2322191	TR 2SC1740(R)
Q0221	2320644	TR 2SC1013D
Q0226	0573480	TR 2SC458B
Q071	2320143	TR 2SC717TM
Q102	2321984	TR 2SC2060(R)
Q201	0573480	TR 2SC458B
Q705	0573480	TR 2SC458B
Q706	2320637	TR 2SA673C/D
Q307	0573480	TR 2SC458B
Q708	0573480	TR 2SC458B

SYMBOL NO.	PART NO.	DESCRIPTION
Q851	2321951	TR 2SC1213AC
Q852	2321951	TR 2SC1213AC
Q853	2321951	TR 2SC1213AC
! Q702	2324082	TR 2SK105(F)
! Q703	2324082	TR 2SK105(F)
Q851	2321951	TR 2SC1213AC
Q852	2321951	TR 2SC1213AC
Q853	2321951	TR 2SC1213AC

DIODES

D0201	2331851	DI 1SS176/1SS427H
D0202	2331851	DI 1SS176/1SS427H
D0203	2331851	DI 1SS176/1SS427H
D0204	2331851	DI 1SS176/1SS427H
D0205	2331851	DI 1SS176/1SS427H
D0206	2331851	DI 1SS176/1SS427H
D0207	2331851	DI 1SS176/1SS427H
D0208	2331851	DI 1SS176/1SS427H
D0209	2331851	DI 1SS176/1SS427H
D0210	2331851	DI 1SS176/1SS427H
D0211	2331851	DI 1SS176/1SS427H
D0212	2331851	DI 1SS176/1SS427H
D0213	2331851	DI 1SS176/1SS427H
D0214	2331851	DI 1SS176/1SS427H
D0215	2331851	DI 1SS176/1SS427H
D0216	2331851	DI 1SS176/1SS427H
D0217	2331851	DI 1SS176/1SS427H
D0218	2331851	DI 1SS176/1SS427H
D0219	2331851	DI 1SS176/1SS427H
D0220	2331851	DI 1SS176/1SS427H
D0221	2331851	DI 1SS176/1SS427H
D0222	2331851	DI 1SS176/1SS427H
D701	2330351	DI 1S2076
D702	2330351	DI 1S2076
D703	2330351	DI 1S2076
D704	2330351	DI 1S2076
D441	2330351	DI 1S2076
D601	2330351	DI 1S2076
D602	2330351	DI 1S2076
D701	2332251	DI RH1S
D702	2330352	DI 1S2076A
D703	2332141	DI RH1Z
D705	2332251	DI EH1Z
D706	2330352	DI 1S2076A
! D901	2332794	DI RB-156 LFB
ZD101	2331501	ZD MZ5(C)1
ZD201	2331001	ZD MZ6A
ZD301	2331161	ZD MZ11(A)/(B)/(C)
ZD701	2331161	ZD MZ11(A)/(B)/(C)
! ZD703	2331181	ZD MZ18-3L

PRODUCT SAFETY NOTE [illegible]

SYMBOL NO.	PART NO.	DESCRIPTION
ZD704	2331654	ZD MTZJ6.8A/(B)/(C)
ZD801	2334312	DI RL33EB1
ZD802	2331807	ZD MTZJ12
ZD803	2331821	ZD MTZJ9.1
ZD805	2334128	ZD RD5.1EB1
ZD804	2331497	ZD RD5.1EB
		THERMISTORS
* TH901	2140121	TC THERMISTOR
		COILS
L018	2122234	UA AXIAL COIL
L019	2122241	UA AXIAL COIL 47 MICROH
L021	2140348	FILTER COIL 100MH +-10%
L022	2122253	UA AXIAL COIL
L071	2141776	MINI TYPE COIL
L072	2122253	UA AXIAL COIL
L102	2122253	UA AXIAL COIL
L103	2122253	UA AXIAL COIL
L202	2142061	100uH MOLD IFT
L203	2122232	UA AXIAL COIL 2.7UH
L204	2142015	U TYPE MOLD IFT
L205	2142015	U TYPE MOLD IFT
L206	2122251	UA AXIAL COIL 68 MICROH
L209	2122241	UA AXIAL COIL 47UH
L207	2122253	UA AXIAL COIL
L208	2120482	FILTER COIL 100MH +-10%
L304	2122249	UA AXIAL COIL 560H
L305	2122247	UA AXIAL COIL 390H
L401	2122251	UA AXIAL COIL 68 MICROH
L402	2122253	UA AXIAL COIL
L403	2122242	UA AXIAL COIL 27UH
L501	2122236	UA AXIAL COIL 8.2UH
L502	2122238	UA AXIAL COIL 8.2UH
L503	2122238	UA AXIAL COIL 8.2UH
L701	2120484	FILTER COIL
L851	2122254	UA AXIAL COIL 120 UH
* L901	2120870	FILTER COIL
⚠ L902	2102416	DEFLECTING COIL
		TRANSFORMERS
* T401	2750554	[illegible]
T501	2141619	AUDIO PASS TRANSFORMER
⚠ T701	2933701	FLYBACK TRANSFORMER
T702	2760021	TRANSISTOR HORIZONTAL DRIVE

SYMBOL NO.	PART NO.	DESCRIPTION
		COMPOUND COMPONENTS
CF401	2500133	SAW FILTER HW2063
MF401	2142241	CERAMIC FILTER 4.5MHZ
MF402	2142601	CERAMIC FILTER 4.5MHZ
MF403	2750381	CERAMIC FILTER
		FUSES
⚠ F901	2720582	FUSE 4A
* F902	2720311	FUSE 3A
		MISCELLANEOUS
SL401	2163291	DELAY LINE
⚠ J451	2670292	JACK EARPHONE
SP451	2840037	SPARK GAP
* SP451	2911791	SPEAKER MOX1.5MM
SW203	2631722	KEY SWITCH
SW204	2631722	KEY SWITCH
SW205	2631722	KEY SWITCH
SW206	2631722	KEY SWITCH
SW208	2800471	SLIDE SWITCH
SW210	2631722	KEY SWITCH
S501	2630582	PUSH SWITCH
* S901	2931622	POWER ON-OFF SWITCH
⚠ V1	2352975	CRT A51KYTE22 BF
X0201	2785302	CRYSTAL 4.5MHZ
X501	2790441	CRYSTAL
	3043209	TELESCOPIC ANTENNA
*	2425453	TUNER ET-397PA
⚠	2741553	DEFLECTION YOKE (HTT)
*	2659471	INSULATOR FOR FOCUS LEAD
	2660413	PLUG
	2661752	3P PIN PLUG WITH BASE
	2697564	ANTENNA BOX
	2697951	VHF ADAPTOR
	2720221	FUSE HOLDER
	2730063	EARPHONE
*	2742553	AC CORD
	2750243	ROD ANTENNA ASS
	2750341	LOOP ANTENNA SASS
	2771892	FERRITE BEADS CORE 004
	2781282	BEAD BAND
	2701695	INSULATION WASHER FOR TR701 YD-1D
	2704331	CRT SOCKET FOCUS COVER
	2704505	FEEDER SET
	2785791	MICA SHEET
	2786281	MICA SHEET

PRODUCT SAFETY NOTE Components marked [illegible] components identified by the PRODUCT SAFETY [illegible] improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION
	2786201	[illegible] SHEET
	2950201	CRT SOCKET
	3216484	CABINET ASS'Y W/A [illegible]
	3216486	CABINET ASS'Y W/A [illegible]
	3236751	CONTROL ASS'Y
	3265352	MAIN KNOB
	3265301	CHANNEL BUTTON
	3245381	LR KNOB
	3245391	KNOB [illegible]
	3215431	KNOB METAL
	3230241	[illegible] SPRING
	3415101	ANTENNA BASE ASS [illegible]
	3456662	BACK COVER PCB HOLDER
	3109662	CANCEL RIVET
	3700501	LEAD CLAMP
	3417972	HOLDER-AC LINE CORD
	3749201	ANTENNA HOLDER [illegible]
	3702201	AC CORD HOLDER
	3478101	CORD CASE (HTT)
	3430181	CH SW CAP
	4179416	3X12 TAPPING SCREW
	4179421	M3X8 TAPPING SCREW
	4179427	M3X12 [illegible]
	4241091	HEAT SINK
	4328272	[illegible]
	4618152	M2.6 NUT
	4614001	WASHER

HITACHI PARTS ORDERING INFORMATION

To receive original replacement parts, please contact your nearest HITACHI Parts Distributor or contact Hitachi Central Parts Warehouse listed below. Be sure to indicate part catalog number, part description and model number located on back of product.

THE ELECTRONIC DISTRIBUTION CO
1509 E. Del Amo Blvd. Carson, CA 90746
Phone #213 639 4120

TEL VIDEO CORPORATION
1921 N. Milwaukee Avenue Chicago, IL 60647
Phone #312 235 6190

REMCOR ELECTRONICS
10670 W. 9 Mile Road Oak Park, MI 48237
Phone #313 541 5666

VANCE BALDWIN, INC
7700 N.W. 7th Avenue Miami, FLA 33150
Phone #305 693 2921

PANSON ELECTRONICS
32 70 31st ST. Long Island City, N.Y. 11106
Phone #212 545 8888

TEE VEE SUPPLY CO
321 Washington St. Jamaica Plain, MA 02130
Phone #617 522 9330

MARTIN WHOLESALE, INC
6 Terrace Shopping Center Richardson, Tx. 75081
Phone #214 231 1826

HARCO ELECTRONICS, INC
Carsin Run Aberdeen, MD 21001
Phone #301 838 7990

HITACHI SERVICE MANUALS

To order HITACHI Service Manuals, contact

HITACHI SALES CORPORATION OF AMERICA
Central Parts Warehouse 401 W. Artesia Blvd.
Compton, CA 90220
Phone #213 537 8383

For information concerning repairs, operation or technical assistance, please contact the Service Manager at the nearest Hitachi Regional Office Service Division listed.

Southern Regional Office
510 Plaza Dr. College Park, GA 30349
Phone #404 763 0360

Mid Western Regional Office
1400 Morse Avenue Elk Grove Village, IL 60007
Phone #312 593 1550

Eastern Regional Office
1200 Wall Street West Lyndhurst, NJ 07071
Phone #201 935 8980

Western Regional Office
401 W. Artesia Blvd. Compton, CA 90220
Phone #213 537 8383

HITACHI

HITACHI SALES CORPORATION OF AMERICA

NATIONAL HEADQUARTERS OFFICE:	401 West Artesia Blvd., Compton Calif. 90220	Tel. 213 537 8383
Western Regional Office:	401 West Artesia Blvd., Compton Calif. 90220	Tel. 213 537 8383
Eastern Regional Office:	1200 Wall St. West, Lyndhurst, N.J 07071	Tel. 201 935 8980
Mild Western Regional Office:	1400 Morse Ave., Elk Grove Village Chicago, Ill. 60007	Tel. 312 593 1550
Southern Regional Office:	510 Plaza DR., College Park, Georgia 30349	Tel. 404 763 0360

HITACHI SALES CORPORATION OF HAWAII, INC.

3219 Koapaka Street Honolulu, Hawaii 96819 Tel. 836 3621

HITACHI SALES CORPORATION DE PANAMA, S.A.

Apartado 7656, Panama 5, Calle Ramon Arias Y Calle 8, Edificio Brasil 100,
Nuevo Reparto el Carmen, Republic de Panama Tel. 61 3100

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